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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,157	05/09/2001	Yasuo Suzuki	35.C15343	2510

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

PHAM, HAI CHI

ART UNIT PAPER NUMBER

2861

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,157

Applicant(s)

SUZUKI ET AL.

Examiner

Hai C Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE & Preliminary Amendment (05/30/03).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 15-20 and 22-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 15-20 and 22-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 05/30/03 for a Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/851,157 is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 22 recites the following limitation "including two said optical boxes", which appears to be conflicting with the limitation set forth in claim 18 from which claim 22 is dependent. Indeed, each optical box is defined in claim 20 as containing the single deflecting means, the mirrors and the plurality of lenses; therefore two deflecting means are claimed versus the single deflecting means set forth in claim 18.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 11, 15-17, 23-26, 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakashima et al. (U.S. 5,652,611).

With regard to claims 11, 23, 30-31, Nakashima et al. discloses an optical scanning system comprising a light source (laser diode 1), rotational deflecting means (polygon mirror 4) for deflecting light emitted from said light source, a mirror (reflection mirror 22) for reflecting the light deflected by said deflecting means, an image bearing member (photosensitive drum 6) to which the light reflected by said mirror is irradiated, and a plurality of lenses (correction lens 5 that can be configured as a plurality of lenses) (col. 9, lines 62-67) for image-forming the light reflected by said mirror onto said image bearing member, wherein in an optical path along which the light deflected by said deflecting means is directed toward said image bearing member, said plurality of lenses are provided on a downstream side of said mirror.

With regard to claims 15-17, 24-26, 32, Nakashima et al. further teaches:

- the plurality of lenses being scanning lenses (lens 5 having f- θ characteristic) (col. 9, lines 15-21),

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- said deflecting means (4) including a polygon mirror (Fig. 1) having a reflecting surface, and one of said plurality of lenses corrects an inclination of the reflecting surface of said polygon mirror (col. 9, lines 5-14),
- only one said mirror is arranged in the optical path (Fig. 1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11, 18-20, 23, 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasaka et al. (U.S. 6,313,906 B1) in view of Nakashima et al.

Nagasaka et al. discloses a multibeam scanning device comprising a plurality of light sources (laser diodes 51), rotational deflecting means (a single polygon mirror 55) for deflecting light emitted from each of said light sources, a mirror (reflection mirrors 57) for reflecting the corresponding light deflected by said deflecting means, a corresponding image bearing member (photosensitive drums 61) to which the light reflected by said mirror is irradiated, and a plurality of lenses (imaging lenses 56 and 59) for image-forming the light reflected by said mirror onto said image bearing member. Nagasaka et al. also discloses one (lens 59) of the plurality of lenses being provided on a downstream side of said mirror, but fails to teach all the plurality of the scanning lenses being provided on a downstream side of said mirror.

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However, Nakashima et al. discloses an optical scanning system in which plural scanning lenses (5) are provided on a downstream side of the reflecting mirror (22) along the optical path from the polygon mirror (4) to the photosensitive drum (6).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Nagasaka et al. with the aforementioned teaching of Nakashima et al. The motivation for doing so would have been to allow the exposure beam to be accurately focused on the surface to be scanned as well as to correct the curvature field in the primary scanning direction.

Nagasaka et al. also discloses an optical box (50) for containing the polygon mirror, the reflecting mirror and the scanning lenses.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (703) 308-1281. The examiner can normally be reached on T-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin R. Fuller can be reached on (703) 308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722, (703) 308-7724, (703) 308-7382, (703) 305-3431, (703) 305-3432 for regular communications and for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



HAI PHAM
PRIMARY EXAMINER

July 25, 2003